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MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

VOL. XXXV. *February* 12, 1875. No. 4.

PROFESSOR J. C. ADAMS, F.R.S., President, in the Chair.

W. H. Cole, Esq., M.A., India, and Great Plumstead, Norwich;
Nathaniel E. Green, Esq., 3 Circus Road, St. John's Wood;
Don José M. Gonzalez, Paris;
E. W. Maunder, Esq., Royal Observatory, Greenwich;
W. D. Niven, Esq., M.A., Woolwich Common;
Lieut. Jelinger E. Symons, R.N., 6 Berners Street, Oxford Street; and
W. H. Thornthwaite, Esq., 3 Holborn Viaduct, E.C.;

were balloted for and duly elected Fellows of the Society.

Report of the Council to the Fifty-fifth Annual General Meeting of the Society.

Progress and present state of the Society:—

	Compounders	Annual Subscribers	Non-resident	Patroness, and Honorary	Total Fellows	Associates	Grand Total
December 31, 1873	197	325	8	2	532	44	576
Since elected ...	+8	+33	...	...	...	5	...
Deceased	−5	−2	−3	...	...	−4	...
Removals	+2	−2	...	...	...	...	...
Resigned	...	−1	...	...	...	...	...
Expelled	...	−10	...	...	...	...	...
December 31, 1874	202	343	5	2	552	45	597

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Mr. Whitbread's Account as Treasurer of the Royal

RECEIPTS.

	£	s.	d.	£	s.	d.
Balance of last year's account				453	4	1
By Dividend on £3,600 Consols	53	6	6			
,, ,, £5,200 New 3 per Cents. ...	77	0	6			
,, ,, £3,600 Consols	53	11	0			
,, ,, £5,200 New 3 per Cents. ...	77	7	0			
				261	5	0
Received for arrears of contributions	131	5	0			
,, 196 Annual contributions	411	12	0			
,, 46 Admission fees	96	12	0			
,, First year's contributions	64	1	0			
				703	10	0
,, 10 compositions				210	0	0
,, Sale of publications at the Rooms of the Society	24	6	9			
,, By Williams and Norgate, 1874 ...	39	5	1			
				63	11	10
,, From Indian Government, for engraving Col. Tennant's photographs				105	0	0
,, Sale of old fittings				5	0	0
,, Sale of £500 Consols at $92\frac{1}{4}$ (including commission)				460	12	6
				£2,262	3	5

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Astronomical Society, from Dec. 31, 1873, *to Dec.* 31, 1874.

EXPENDITURE.

	£	s.	d.	£.	s.	d.
Salaries:—						
Editor of Monthly Notices	60	0	0			
Assistant Secretary	130	0	0			
Commission on Collecting	31	6	0			
				221	6	0
Taxes:—						
Land and Assessed	8	9	6			
Poor and General Rates, &c.	9	19	9			
				18	9	3
Bills:—						
Spottiswoode & Co., printers	224	19	6			
Oxford University Press	193	17	6			
Prof. Pritchard, Sir J. Herschel's Catalogue	20	0	0			
Wesley, engraver	62	12	0			
Whiteman ,, ...	23	5	0			
Mc Queen ,, ...	8	0	0			
Scott ,, ...	8	0	0			
Malby ,, ...	59	3	11			
Pound ,, ...	88	8	0			
Rumfitt, bookbinder	16	7	6			
Snowdon, furniture, removal, &c.	376	5	2			
Perry & Co., furniture and seats in meeting room, &c.	321	11	9			
Barry, architect	21	0	0			
Executors of T. W. Burr, Solicitor	15	4	5			
Wilson and Davis, tea and coffee services, &c. for evening meetings	11	3	3			
				1,449	18	0
Miscellaneous:—						
House expenses	25	1	8			
Stamps and postage	54	17	2			
Books and parcels	4	4	6			
Expenses of evening meetings	17	10	0			
Coals and gas	28	1	5			
Repairs	1	17	10			
Stationery	9	17	4			
Repacking Stock at Burlington House, &c. ...	19	10	0			
Sundries	18	10	9			
Bankers' Commission on cheques	0	1	4			
Power of Attorney for sale of £500 Consols	0	11	6			
Mrs. Jackson-Gwilt's annuity	8	18	4			
				189	1	10
In hand: Petty Cash Account				16	9	4
Balance at Bankers'				366	19	0
				£2,262	3	5

Examined and found correct,

January 19, 1875.

Arthur Brewin,
Robt. J. Lecky,
Henry Toynbee, } *Auditors.*

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Assets and present Property of the Society, January 1, 1875:—

	£	s.	d.	£	s.	d.
Balance at Bankers' … … … …	……			366	19	0
1 Contribution of 9 years' standing … …	18	18	0			
3 ” 8 ” … …	50	8	0			
6 ” 5 ” … …	63	0	0			
11 ” 4 ” … …	92	8	0			
17 ” 3 ” … …	107	2	0			
25 ” 2 ” … …	105	0	0			
73 ” 1 ” … …	153	6	0			
				590	2	0
Balances in hand: Petty Cash … … …	……			16	9	4

£5,200 New 3 per Cents. (including Mrs. Jackson-Gwilt's Gift, £300).

£3,100 Consols, including the Lee Fund (£100) and Turnor Fund (£500).

Unsold Publications of the Society.

Various astronomical instruments, books, prints, &c.

Four Gold Medals in stock.

Stock of volumes of the *Memoirs*:—

Vol.	Total	Vol.	Total	Vol.	Total
I. Part 1	8	XIV.	361	XXIX.	437
I. Part 2	49	XV.	165	XXX.	190
II. Part 1	67	XVI.	276	XXXI.	191
II. Part 2	29	XVII.	167	XXXII.	192
III. Part 1	80	XVIII.	166	XXXIII.	196
III. Part 2	99	XIX.	177	XXXIV.	159
IV. Part 1	95	XX.	174	XXXV.	145
IV. Part 2	102	XXI. Part 1	214	XXXVI. (with M.N.)	221
V.	121	XXI. Part 2	100	XXXVI. (without)	23
VI.	141	XXI. (together)	80		
VII.	166	XXII.	175	XXXVII. Part 1	398
VIII.	147	XXIII.	171	XXXVII. Part 2	408
IX.	154	XXIV.	177	XXXVIII.	348
X.	167	XXV.	180	XXXIX. Part 1	372
XI.	177	XXVI.	197		
XII.	182	XXVII.	449	XXXIX. Part 2	407
XIII.	196	XXVIII.	410	XL.	…

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The instruments belonging to the Society are as follow:—

The *Harrison* clock,
The *Owen* portable circle,
The *Beaufoy* circle,
The *Beaufoy* transit,
The *Herschelian* 7-foot telescope,
The *Greig* universal instrument,
The *Smeaton* equatoreal,
The *Cavendish* apparatus,
The 7-foot Gregorian telescope (late Mr. Shearman's),
The Variation transit (late Mr. Shearman's),
The Universal quadrant, by Abraham Sharp,
The *Fuller* theodolite,
The Standard scale,
The *Beaufoy* clock, No. 1,
The *Beaufoy* clock, No. 2,
The *Wollaston* telescope,
The *Lee* circle,
The *Sharpe* reflecting circle,
The *Brisbane* circle,
The *Baker* universal equatoreal,
The *Reade* transit,
The *Matthew* equatoreal,
The *Matthew* transit,
The *South* transit,
A Sextant formerly belonging to Capt. Cook,
A Globe for showing the Precession of the *Equinoxes*.

The *Sheepshanks* collection of instruments, viz.—

1. 30-inch transit by Simms, with level and two iron stands.

2. 6-inch transit theodolite, with circles divided on silver; reading microscopes, both for altitude and azimuth; cross and siding levels; magnetic needle; plumbline; portable clamping foot and tripod stand.

3. $4\frac{6}{10}$ achromatic telescope, about 5 feet 6 inches focal length; finder, rack motion; two other micrometers; one terrestrial and ten astronomical eyepieces, applied by means of two adapters, with equatoreal stand and clock movement.

4. $3\frac{1}{4}$-inch achromatic telescope, with equatoreal stand; double-image micrometer; one terrestrial and three astronomical eyepieces.

5. $2\frac{3}{4}$-inch achromatic telescope, with stand; one terrestrial and three astronomical eyepieces.

6. $2\frac{3}{4}$ achromatic telescope, about 30 inches focus; one terrestrial and four astronomical eyepieces.*

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* This instrument was lent to the late Rev. J. Cape; the Council have not been able to discover anyone who could give information as to how it has been appropriated.

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7. 2-foot navy telescope.

8. 45-inch transit instrument, with iron stand, and also Y's for fixing to stone piers; two axis levels.

9. Repeating theodolite, by Ertel, with folding tripod stand.

10. 8-inch pillar sextant, divided on platinum, with counterpoise stand and horizon roof.

11. Portable zenith instrument, with detached micrometer and eyepiece.

12. 18-inch Borda's repeating circle, by Troughton.

13. 8-inch vertical repeating circle, with diagonal telescope by Troughton and Simms.

14. A set of surveying instruments, consisting of a 12-inch theodolite for horizontal angles only, with extra pair of parallel plates; tripod staff, in which the telescope tube is packed; repeating table; level collimator, with micrometer eyepiece; and Troughton's levelling staff.

15. Level collimator, plain diaphragm.

16. 10-inch reflecting circle, by Troughton, with counterpoise stand; artificial horizon, with metallic roof; two tripod stands, one with table for artificial horizon.

17. Hassler's reflecting circle, by Troughton, with counterpoise stand.

18. 6-inch reflecting circle, by Troughton, with two counterpoise stands, one with artificial horizon.

19. 5-inch reflecting circle, by Lenoir.

20. Reflecting circle, by Jecker, of Paris.

21. Box sextant and 3-inch plane artificial horizon.

22. Prismatic compass.

23. Mountain barometer.

24. Prismatic compass.

25. 5-inch compass.

26. Dipping needle.

27. Intensity needle.

28. Ditto ditto.

29. Box of magnetic apparatus.

30. Hassler's reflecting circle, with artificial horizon roof.

31. Box sextant and $2\frac{1}{4}$-inch glass plane artificial horizon.

32. Plane speculum artificial horizon and stand.

33. $2\frac{1}{2}$-inch circular level horizon, by Dollond.

34. Artificial horizon roof and trough.

35. Set of drawing instruments, consisting of 6-inch circular protractor; common ditto; 2-foot plotting scale; two beam compasses and small T-square.

36. A pentagraph.

37. A noddy.

38. A small Galilean telescope, with the object-lens of rock-crystal.

39. Six levels, various.

40. 18-inch celestial globe.

41. Varley stand for telescope.

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42. Thermometer.
43. Telescope, with the object-glass of rock crystal.

To these must be added the following instruments, which had been employed in the Observations of the Total Solar Eclipse of 1870, and which, by a resolution of the Joint Eclipse Committee of 1870, were transferred to the Royal Astronomical Society:—

Portable equatoreal stand,
Portable altazimuth tripod,
Four polarimeters,
Two Biquartz and Nicol's prisms,
Registering spectroscope, with prism,
Camera and chemicals, in box,
Two five-prism spectroscopes,
Cradle for telescope,
Eight-inch reflector and stand,
Spectroscope,
A small box, containing—
    Three square-headed Nicol's prisms,
    Two Babinet's compensators,
    Two double-image prisms,
    Three Savarts,
    One positive eyepiece, with Nicol's prism,
    One dark wedge.

These are now in the apartments of the Society, with the exception of the following, which are lent, during the pleasure of the Council, to the several parties under mentioned, viz.:—

The *Fuller* theodolite, to the Director of the Sydney Observatory.
The *Beaufoy* transit, to the Observatory, Kingston, Canada.

The *Sheepshanks* instrument,		Nos. 1, 2, and 4, to the Astronomer Royal, for observation of the Transit of *Venus*.
Ditto	ditto	No. 5, to Mr. Birt.
Ditto	ditto	No. 8, to Rev. C. Pritchard.
Ditto	ditto	No. 9, to the Director of the Sydney Observatory.
Ditto	ditto	Nos. 11, 16, and 17 to the Astronomer Royal, for observation of the Transit of *Venus*.
Ditto	ditto	No. 41, to Rev. C. Pritchard.
Ditto	ditto	No. 43, to Mr. Huggins.

The 6-inch circular protractor, to Mr. Birt.
Tripod stand. Mr. Chambers.
Two Savart prisms. Mr. Burton and Mr. Hunter.
Registering spectroscope, with prism, Mr. Hunter.

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Lent on account of the Eclipse Expeditions of 1870 and 1871:—

One polarimeter.	Mr. Ranyard.
One ditto.	B. A. Eclipse Committee.
Camera and chemicals in box.	B. A. Eclipse Committee.
One five-prism spectroscope.	B. A. Eclipse Committee.
One ditto.	Mr. Lockyer.
Cradle for telescope.	Mr. W. A. Harris.

The Gold Medal.

The Council have awarded the Gold Medal to Prof. D'Arrest, for his work entitled "Siderum Nebulosorum Observationes Havnienses institutæ in Specula Universitatis per Tubum Sedecimpedalem Merzianum ab Anno 1861 ad Annum 1867," and his other astronomical works. The President will explain to the Meeting the grounds of this award after the reading of the Annual Report.

Publications of the Society.

Volume XL. of the *Memoirs*, containing Sir John Herschel's posthumous Catalogue of Double Stars, is now published, and may be obtained by Fellows on application, in the usual manner, to the Assistant Secretary, at the apartments of the Society. Although this Catalogue does not contain the angular distances and positions of the components, yet the work will be found valuable to observers as an Index to the Double-star Catalogues from which it is compiled. The insertion of these additional data would undoubtedly have greatly enhanced the value of the Catalogue, but, after due consideration, the Editors considered it better to publish the work, with but slight modifications, as left by its illustrious compiler at the time of his lamented death.

Volume XLI., containing the collected accounts of the observations of Total Eclipses of the Sun from 1842 to 1871, is also far advanced, and the Council hope that it will be published in the current year. This volume will be a highly important one, and it will doubtless be much sought after, not only by the Fellows, but by the public generally.

Volume XLII. is also in the press, and it will contain, in addition to other papers, Colonel Tennant's Report on the Total Eclipse of the Sun of December 11-12, 1871, illustrated with fine engravings of four of the photographs taken at Dodabetta.

The volumes of the *Monthly Notices* still retain the high estimation with which they are held by astronomers of all nations.